What is claimed is:

1. A movement control system for an apparatus comprising a movable member movable between two different positions, a power generator for generating power for moving the movable member, and a sensor device for producing an output value changeable while the movable member moves between the two positions, the movement control system being operable to control the movement of the movable member between one of the two positions and the other position,

the control system being operable to drive the power generator in a first amount enabling the movable member to reach the other position so as to move the movable member from said one position toward said other position, the control system being thereafter operable to drive the power generator in a second amount enabling the movable member to reach said one position when the output value of the sensor device remains unchanged, so as to move the movable member toward said one position, the control system being operable to drive the power generator in a third amount not enabling the movable member to reach said one position when the sensor device produces a changed output value, so as to move the movable member toward said one position,

the control system being operable to drive the power generator in a fourth amount enabling the movable member to reach said other position after the power generator is driven in the third amount, when the output value of the sensor device is different from the output value before the power generator is driven in the first amount, so as to move the movable member toward said other position, the control system being operable to drive the power generator in the second amount when the output value of the sensor device is the same as the output value before the power generator is driven in the first amount, so as to move the movable member toward said one position.

2. A movement control system according to claim 1 wherein the power generator is a stepping motor, and the first to fourth amounts of driving are determined in accordance with the number of pulses to be given to the stepping motor.

3. A movement control system according to claim 1 wherein the power generator is a D.C. motor, and the first to fourth amounts of driving are determined in accordance with the duration of application of voltage to the D.C. motor.

4. A movement control system for an apparatus comprising a movable member movable between two different positions, a power generator for generating power for moving the movable member, and a sensor device for producing an output value changeable while the movable member moves between the two positions, the movement control system being operable to control the movement of the movable member between one of the two positions and the other position,

the control system being operable to drive the power generator in a first amount enabling the movable member to reach the other position so as to move the movable member from said one position toward said other position, the control system being thereafter operable to drive the power generator in a second amount not enabling the movable member to reach said one position, so as to move the movable member toward said one position,

the control system being operable to drive the power generator in a third amount enabling the movable member to reach said other position after the power generator is driven in the second amount, when the output value of the sensor device is different from the output value before the power generator is driven in the first amount, so as to move the movable member toward said other position, the control system being operable to drive the power generator in a fourth amount enabling the movable member to reach said one position when the output value of the sensor device is the same as the output value before the power generator is driven in the first amount, so as to move the movable member toward said one position.

5. A movement control system according to claim 4 wherein the power generator is a stepping motor, and the first to fourth amounts of driving are determined in accordance with the number of pulses to be given to the stepping motor.

6. A movement control system according to claim 4 wherein the power generator is a D.C. motor, and the first to fourth amounts of driving are determined in accordance with the duration of application of voltage to the D.C. motor.

7. A camera apparatus comprising a movable member having fixed thereto two filters one of which is selectably installed in position between a lens and a solid image pickup device, a power generator for generating power for moving the movable member, a sensor device for producing an output value changeable while the movable member moves between two filter installation positions, and a control system for controlling the movement of the movable member between a first installation position where one of the filters is installed in position and a second installation position where the other filter is installed in position,

the control system being operable to drive the power generator in a first amount enabling the movable member to reach the second installation position so as to move the movable member from the first installation position toward the second installation position, the control system being thereafter operable to drive the power generator in a second amount enabling the movable member to reach the first installation position when the output value of the sensor device remains unchanged, so as to move the movable member toward the first installation position, the control system being operable to drive the power generator in a third amount not enabling the movable member to reach the first installation position when the sensor device produces a changed output value, so as to move the movable member toward the first installation position,

the control system being operable to drive the power generator in a fourth amount enabling the movable member to reach the second installation position after the power generator is driven in the third amount, when the output value of the sensor device is different from the output value before the power generator is driven in the first amount, so as to move the movable member toward second installation position, the control system being operable to drive power generator in the second amount when the output value of the sensor device is the same as the output value before the power generator is driven in the first amount, so as to move the movable member toward the first installation position.

8. A camera apparatus according to claim 7 wherein the power generator is a stepping motor, and the first to fourth amounts of driving are determined in accordance with the number of pulses to be given to the stepping motor.

9. A camera apparatus according to claim 7 wherein the power generator is a D.C. motor, and the first to fourth amounts of driving are determined in accordance with the duration of application of voltage to the D.C. motor.

10. A camera apparatus comprising a movable member having fixed thereto two filters one of which is selectably installed in position between a lens and a solid image pickup device, a power generator for generating power for moving the movable member, a sensor device for producing an output value changeable while the movable member moves between two filter installation positions,

and a control system for controlling the movement of the movable member between a first installation position where one of the filters is installed in position and a second installation position where the other filter is installed in position,

the control system being operable to drive the power generator in a first amount enabling the movable member to reach the second installation position so as to move the movable member from the first installation position toward the second installation position, the control system being thereafter operable to drive the power generator in a second amount not enabling the movable member to reach the first installation position, so as to move the movable member toward the first installation position,

the control system being operable to drive the power generator in a third amount enabling the movable member to reach the second installation position after the power generator is driven in the second amount, when the output value of the sensor device is different from the output value before the power generator is driven in the first amount, so as to move the movable member toward second installation position, the control system being operable to drive the power generator in a fourth amount enabling the movable member to reach the first installation position when the output value of the sensor device is the same as the output value before the power generator is driven in the first amount, so as to move the movable member toward the first installation position.

11. A camera apparatus according to claim 10 wherein the power generator is a stepping motor, and the first to fourth amounts of driving are determined in accordance with the number of pulses to be given to the stepping motor.

12. A camera apparatus according to claim 10 wherein the power generator is a D.C. motor, and the first to fourth amounts of driving are determined in accordance with the duration of application of voltage to the D.C. motor.

13. A control method for an apparatus comprising a movable member movable between two different positions, a power generator for generating power for moving the movable member, and a sensor device for producing an output value changeable while the movable member moves between the two positions, the control method being adapted to control the movement of the movable member between one of the two positions and the other position, the control method including:

the first step of driving the power generator in a first amount enabling the movable member to reach said other position so as to move the movable member from said one position toward said other position,

the second step of thereafter driving the power generator in a second amount enabling the movable member to reach said one position when the output value of the sensor device remains unchanged, so as to move the movable member toward said one position, and driving the power generator in a third amount not enabling the movable member to reach said one position when the sensor device produces a changed output value, so as to move the movable member toward said one position, and

the third step of subsequently driving the power generator in a fourth amount enabling the movable member to reach said other position when the output value of the sensor device is different from the output value before the first step, so as to move the movable member toward said other position, and driving the power generator in the second amount when the output value of the sensor device is the same as the output value before the first step, so as to move the movable member toward said one position.

14. A control method according to claim 13 wherein the power generator is a stepping motor, and the first to fourth amounts of driving are determined in accordance with the number of pulses to be given to the stepping motor.

15. A control method according to claim 13 wherein the power generator is a D.C. motor, and the first to fourth amounts of driving are determined in accordance with the duration of application of voltage to the D.C. motor.

16. A control method for an apparatus comprising a movable member movable between two different positions, a power generator for generating power for moving the movable member, and a sensor device for producing an output value changeable while the movable member moves between the two positions, the control method being

adapted to control the movement of the movable member between one of the two positions and the other position, the control method including:

the first step of driving the power generator in a first amount enabling the movable member to reach said other position so as to move the movable member from said one position toward said other position,

the second step of thereafter driving the power generator in a second amount not enabling the movable member to reach said one position so as to move the movable member toward said one position, and

the third step of subsequently driving the power generator in a third amount enabling the movable member to reach said other position when the output value of the sensor device is different from the output value before the first step, so as to move the movable member toward said other position, and driving the power generator in a fourth amount enabling the movable member to reach said one position when the output value of the sensor device is the same as the output value before the first step, so as to move the movable member toward said one position.

17. A control method according to claim 16 wherein the power generator is a stepping motor, and the first to fourth amounts of driving are determined in accordance with the number of pulses to be given to the stepping motor.

18. A control method according to claim 16 wherein the power

generator is a D.C. motor, and the first to fourth amounts of driving are determined in accordance with the duration of application of voltage to the D.C. motor.

19. A control method according to claim 16 wherein the apparatus is a camera apparatus, the movable member having fixed thereto two filters one of which is selectably installed in position between a lens and a solid image pickup device, and the sensor device produces an output value which changes while the movable member moves between two filter installation positions.